Volunteer Lake Assessment Program Individual Lake Reports

HOUSTON POND, CHESTER, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	1,453	**Max. Depth (m):**	2.6	**Flushing Rate (yr^{1}):**	32.5
Surface Area (Ac.):	20	**Mean Depth (m):**	1.2	**P Retention Coef:**	0.4
Shore Length (m):	2,100	**Volume (m^3):**	94,000	**Elevation (ft):**	390

TROPHIC CLASSIFICATION

Year	Trophic class
2000	EUTROPHIC

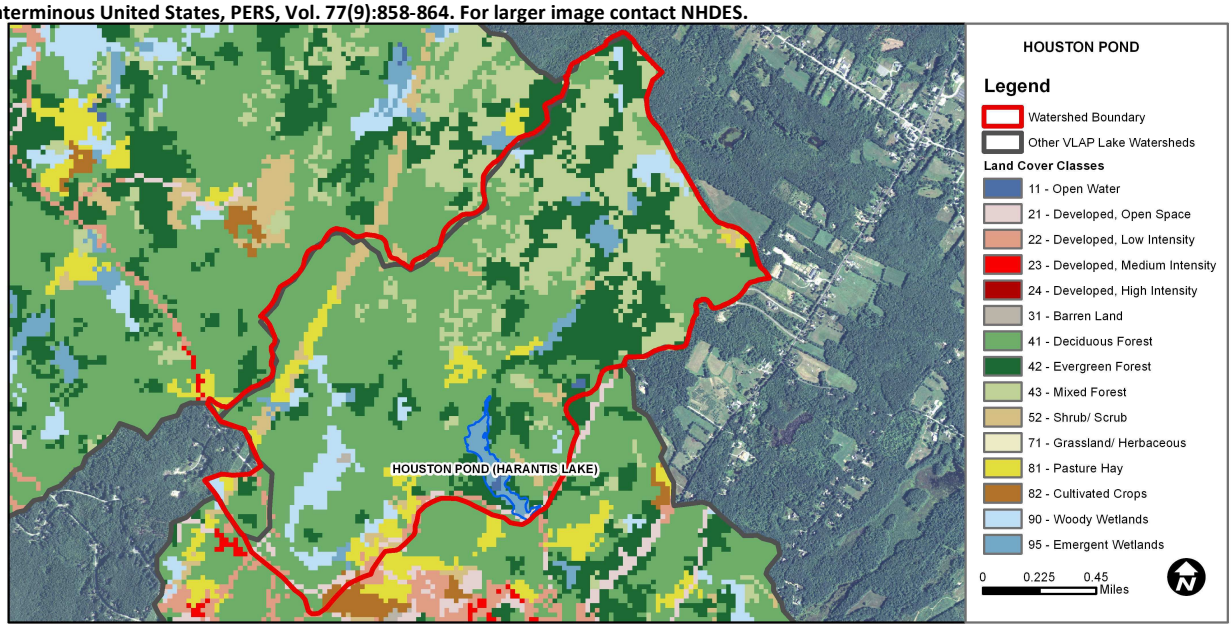
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	>/=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	Chlorophyll-a	Good	>/=5 samples and median is < threshold but > 1/2 threshold value.
Primary Contact Recreation	E. coli	No Data	No Data for this parameter.
	Chlorophyll-a	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	0.18	Barren Land	0.08	Grassland/Herbaceous	0
Developed-Open Space	0.91	Deciduous Forest	49.2	Pasture Hay	3.56
Developed-Low Intensity	1.08	Evergreen Forest	18.9	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	15.68	Woody Wetlands	4.74
Developed-High Intensity	0	Shrub-Scrub	2.57	Emergent Wetlands	2.92

VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS
HARANTIS LAKE, CHESTER, NH
2012 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (*Refer to Table 1 and Historical Deep Spot Data Graphic)*

- **CHLOROPHYLL-A:** Chlorophyll levels were elevated in August and greater than the NH lake median. However, chlorophyll levels decreased greatly from 2010.
- **CONDUCTIVITY/CHLORIDE:** Conductivity levels were only slightly greater than the NH lake median.
- **TOTAL PHOSPHORUS:** Phosphorus levels were fairly average for the pond however slightly greater than NH lake median. Epilimnetic phosphorus levels decreased greatly from 2010.
- **TRANSPARENCY:** Lake transparency was good and the Secchi disk was visible on the pond bottom using the viewscope.
- **TURBIDITY:** Turbidity levels were average for the pond.
- **PH:** Deep spot pH levels were slightly lower than desirable and historically have been at critical levels.
- **RECOMMENDED ACTIONS:** This pond is a small riverine impoundment with a relatively quick flushing rate; however water levels were low in 2012 which reduced pond flushing and likely influenced water quality. Conduct chloride monitoring in the future to assess any road salting impacts. Continue annual monitoring to establish water quality trends.

Dissolved Oxygen & Temperature Profile

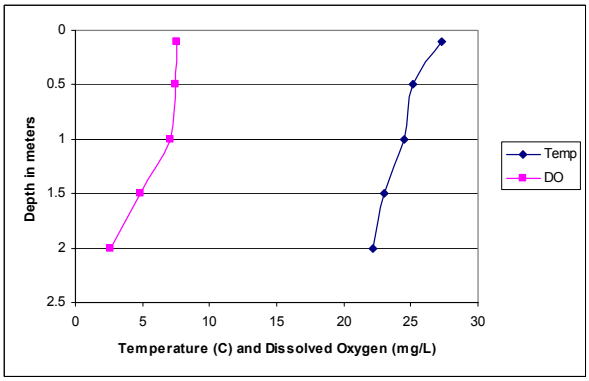


Table 1. 2012 Average Water Quality Data for HARANTIS LAKE

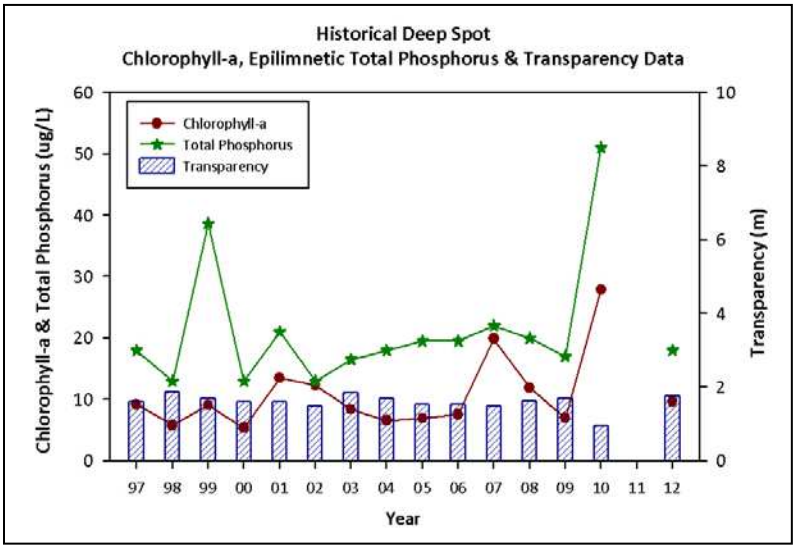
Station Name	Alk.	Chlor-a	Cond.	Total P	Trans.		Turb.	pH
	mg/l	ug/l	uS/cm	ug/l	m		ntu	
					NVS	VS		
Dam Outlet			57.1	14			1.17	6.72
Deep Epilimnion	4.20	9.69	56.7	18	1.75	2	1.21	6.47

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m^3
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.
Chloride: < 230 mg/L (chronic)
E. coli: > 88 cts/100 mL – public beach
E. coli: > 406 cts/100 mL – surface waters
Turbidity: > 10 NTU above natural level
pH: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	N/A	Non-consecutive data; trend analysis not performed.
Transparency	N/A	Non-consecutive data; trend analysis not performed.
Phosphorus (epilimnion)	N/A	Non-consecutive data; trend analysis not performed.



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